



MAMMILLARIA THORNERI

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Espinas y Flores

BULLETIN OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY
Affiliate of the Cactus and Succulent Society of America, Inc.

December, 1980

December Meeting

Saturday, December 13, 1980

1:30 pm

Casa del Prado, Room 101, Balboa Park

Annual Christmas Party

The San Diego Cactus & Succulent Society extends an invitation to all members to attend our Annual Christmas Party with a gift plant given by lottery to each member. Additionally, those members, who wish to participate in the December Plant Exchange, should place their gifts on the separate table designated for exchange plants. This is the time of year that we can take a few minutes to visit with old and new friends. There will be no Plant Sales, Brag Table or V.I.P. Table. The cactus and succulent of the month are "your favorite."

A Christmas Carol

I HEAR along our street
Pass the minstrel throngs;
Hark! they play so sweet,
On their hautboys, Christmas songs!
Let us by the fire
Ever higher
Sing them till the night expire!

Henry Wadsworth Longfellow

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Calendar for 1981

| <u>Meeting Date</u> | <u>Succulent-of-the-Month</u> | <u>Cactus-of-the-Month</u> |
|---------------------|--|----------------------------|
| January | The "Succulent-of-the-Month" will be submitted monthly by the <u>new</u> author to be announced next year in Espinas y Flores. | <u>Forzicactus</u> |
| February | | <u>Mammillaria</u> |
| March | | <u>Neoporteria</u> |
| April | | <u>Weingartia</u> |
| May | | <u>Loxanthocereus</u> |
| June | | <u>Astrophytum</u> |
| July | PICNIC | PICNIC |
| August | | <u>Austrocephalocereus</u> |
| September | | <u>Neowerdermannia</u> |
| October | | <u>Copiapoa</u> |
| November | | <u>Cereus</u> |
| December | Your Favorite Succulent | Your Favorite Cactus |

CACTUS CULTURE FOR THE AMATURE COLLECTOR

F. C. Thrombley

This article will attempt to address the techniques of the cultivation of potted terrestrial cactus. The cultivation of epiphytic cactus will not be included in this article.

There are three ingredients that I believe we amateurs should learn most about. They are the compost, the containers and the water we use. All three are dependent on the other to the degree that if we plan ahead properly we will be able to grow and show cacti with pride. Let us look at each one of these ingredients in the order that they are listed.

Compost: A compost may be considered from two entirely different aspects, one physical, the other chemical. Physical properties include porosity, resistance to caking, drainage and moisture retention. Chemical constitution determines nutrient value and balance, organic and inorganic. A plant cannot absorb solid particles from the soil, but only nutritive salts in solution. The soil, that is the earth, has nothing to do with the nourishment, but is only the carrier of nutritive salts in solution. For that reason its physical properties are of great importance for the cultivation of cacti.

- Loamy (clay) soils hold water very well. They also retain nutritive solutions very firmly, not allowing them to be leached out easily. However, loamy clay soils are so closely packed they contain no air spaces. When dried out they split into cracks. For pot culture, therefore, they must be lightened. Fibrous loam is preferred to the clayey loam, and in general, they will not become muddy when wetted, nor cake hard when allowed to dry. The base for almost any potting mix is soil. One can choose between a packaged fibrous loam or a general potting soil.
- Leafmold is a source of fixed nitrogen and carbon dioxide. It should be at least two years old and thoroughly rotted. Being fibrous in nature, it retains moisture well and is often used in composting. Oak leafmold is probably the best for cactus culture because of its acidity. In my opinion a good compost should not be alkaline but have a pH number of between 6 and 6.5. More on this later. I have been using bandini packaged oak leafmold purchased at the local nurseries.
- Coarse sharp sand or agricultural pumice is added to assure open texture in the compost. A compost that will allow the water to drain thoroughly and not leave water pockets. The sand used must be coarse and not childrens play sand which will compact the soil. I prefer the agricultural pumice, it has a coarse granule and will not compact. This pumice is mined in California and is sold in most nurseries. I purchase mine at the Societies plant sales table.

Before mixing these three ingredients to start our compost, lets look at the chemical requirements of the soil. In the cactus regions, mineral salts are formed by gradual weathering of rocks. Since the weathering proceeds continuously, the natural soil in the cactus areas is a changing mixture of particles varying in size from pebbles down to sand and finer. In general, this has been derived from volcanic rocks and often contain a lot of nutritive substances, particularly as the scattered vegetation uses little food material.

In these dry areas the evaporation of moisture from the surface is so great that there is a rising flow of water by the capillary action of the soil. This capillary action brings up to the surface nutritive material from the deeper unused layers. These "deep nutritive salts", products of the weathering of mineral substances, are, however, very poor in nitrates (nitrogen). The soil contains much phosphate and many potassium compounds.

- Nitrogen (N) encourages growth, since it enhances the value of the other building materials. But, in excess - which is soon reached in cacti - it leads to spongy tissue. The result is susceptibility to disease, bad over-wintering and poor flowering.
- Phosphorus (P) absorbed in the form of phosphates, favors the production of flowers, fruits and seeds, and ensures sound growth. It encourages the roots in cuttings.
- Potassium (K) is indispensable to a healthy metabolism of the plants; it increases their power of resistance, even against water shortage.

Therefore, I believe that terrestrial cacti need soil with a high food content containing phosphorous and potassium but little nitrogen.

Beside the food content of the soil, there is also another chemical factor of importance to the well-being of the plant: the soil reaction. By soil reaction, we understand the acidity or alkalinity of the soil solution. The soil reaction is measured by a pH number which ranges from 1 to 14. The neutral value is pH7, values smaller than pH7 are acid and conversly values larger than pH7 are alkaline. All of the authors of articles and books I have read recommend a soil reaction of between pH5 and pH7. Further, they all claim the soil that is alkaline is not the best for growing cacti and can be very detrimental. Through mixing various composts I have found one that suits my needs well and has a pH of 6 to 6.5.

There is one more component that should be considered for our compost: horticultural charcoal. Horticultural charcoal is "activated" to enable it to absorb certain objectionable by-products of bacterial action in soil and so to keep it sweet. Since cacti are apt to remain in one pot for a relatively long period, it is valuable to prevent sourness developing.

There are many different recipes for the compost that one can use. It depends on your ambition, watering habits, location and various other ingredients I call common sense. The real pleasure comes from developing your own compost that works for your set of conditions. However, I will give two recipes which can be used to start us on our way.

#1 (A General Formula)

- 1 part coarse sand or agricultural pumice
- 1 part potting soil (packaged as a general soil for all plants)
- 1 part leafmold

#2 (This formula requires more effort to obtain the components)

- 2 parts fibrous loam - do not use products sold for mulching that have fine particles.
- 1 part oak leafmold
- 1 part agricultural pumice
- 1/8 part bone meal (for phosphorous)
- 1/8 part sulphate of potash (for potassium)
- 1/4 part horticultural charcoal

Both composts should be mixed thoroughly and stored in a clean container protected from the elements. A 3 lb. size coffee can is the measuring device I use. They are usually divided by ribs on the can into four equal parts which makes it easy to measure.

In the next article we will look at the other two ingredients, the containers and the water.

References used:

Marsden, C. 1958 Grow Cacti, Cleaver-Hume, Press, Ltd., London

Buxbaum, Franz 1958 Cactus Culture Based on Biology, Blandford Press, London

Annual Election

Voting will be conducted for six different office positions at the December meeting. The Board's nominating committee has presented the following slate of candidates for consideration:

- President - Rick Latimer
- " - Dr. Lee Phelps
- 1st Vice President - Frank Thrombley
- 2nd Vice President - Caroline Miller
- " " " - John Pasek
- Recording Secretary - Beverly Kirkegaard (Incumbent)
- Treasurer - Joan Johnson (Incumbent)
- Corresponding Secretary - Amna Cornett (Incumbent)

In as much as there are more candidates than there are positions for President and for 2nd Vice President, members will be provided with ballots and voting will be held during the first part of the meeting.

Endangered Species: Are They? Who Can Prove It?

by Robert Kirkpatrick

The questions posed above are real and as yet no one has or can prove whether any species is endangered or not. Most of what you hear or read is based on "guesses", "maybes" or "I think so", or just plain people willing to accept some one's word that they are, without any substantiating evidence. I say this, because nowhere in print has anyone ever taken the time or effort to go out there where the plants are and count them and then go back periodically and recount them to see if they really are declining. Even our great government agencies that put so much faith in numbers has no basis for the endangered species in the field. They have in fact taken the word of a few botanists, who spend less time in the field than most amateurs, that they are endangered. However, these botanists cannot give any firm numbers or records to support such a claim. In fact the botanist themselves cannot say for sure if they even know where each and every population group in the wild is. So how can they know? The Bureau of Land Management is at present trying to get a field count on plants in some areas. This is after the plants have been declared endangered. They may get a good count and they may not. Chances are they will not. They hire outside contractors to make the counts and unless the "counter" is a knowledgeable person about the species he is tracking he will never see 1/10th of the plants that exist there! I offer the case of the elusive Pediocactus which "disappear" in habitat only to be seen at flowering time, and no other. If you are there in the middle of 1000 of them and not at the right time, you see none. There is also the problem of locality. Probably the "counter" has only published information on where the plants grow, and, therefore, will not find or count the population that are not published, or well known. Another fallacy is the well known saying that "so and so" stripped out a colony of plants at "X" location, and they are gone forever. This is impossible. People may harvest the present lot of plants in a locality, taking every visible one, but they all have produced thousands of seeds and they are still there and will germinate and produce a new lot of plants in a few years. The real "villain" of decimating plant groups is nature itself and the weather. If the rain declines too much in our area, the seeds won't germinate and there will be no new plants to carry on the colony. Then too when the rains decline the bugs start using the plants for moisture to propagate themselves and in doing so rot the plants prematurely.

I hereby offer a solution to the decline of native cacti in habitat and if the CSSA Board, and members, really want to do something about the situation except talk and wring their hands, they will adopt it. Call upon the local Clubs in the areas where cactus grow and have them collect seed, grow the seedlings to survival-size and plant them back in habitat. They won't all make it of course, but enough will to turn the tide.

Each Club in an area knows the plants in that area best and can do the job as a Club project. It can do nothing but help the plants and draw every member together to fight the decline. Quit sitting around on your "duff" and trying to "talk" the problem to death! If the CSSA members don't do something like this, it is their fault, partially, for the decline in populations of cacti. No one else will do it, they could care less about cactus plants! Face it, cactus growers are a "minority" in the population of the U.S.A.

The Editor of Espinas y Flores welcomes controversial articles that pose answers to current, contemporary problems that interest us all. The Editor also welcomes constructive criticism of such articles should a member desire to comment.

Member Interviews: Bob & Suzanne Taylor

by Marcia Monroe

Leaving her native Luxembourg, Suzanne migrated to Florida where she taught German and met her husband, Bob; he worked as a fruit horticulturalist in Florida for thirty years. They married in 1933 (during the depression) and shortly thereafter (in 1934) they moved to their present address in El Cajon, California, where Bob became manager of an orchard on the James H. Wells estate. At the same time Bob was given permission to use one acre of land; this benevolent gesture allowed him to carry on his avocation, collecting cacti and succulents.

The Taylors have made extensive yearly collecting trips into Baja California and Mexico which gave them an unique opportunity to view their favorite plants in their natural habitat. Through the years they have become respected for their knowledge of these regions, and Bob has discovered several new succulent species including Echeveria affinis and E. semivestita, and he reestablished the location of Mammillaria ortega. Mammillaria tayloriorum was named by Glass and Foster in his honor. The Taylor's Cactus Garden was established in the 1960's and it contains numerous mature succulent plantings.

Bob has exhibited many of his plants at the Del Mar, Palomar, and San Diego shows.

Suzanne and Bob are charter members of the Palomar Cactus and Succulent Society and with Cleovis Hardin and others formed the San Diego Club in 1961. They are life members of the Cactus and Succulent Society of America including the Affiliate Societies of Palomar, Imperial Valley, and San Diego. Too, they are members of the California Cactus Growers Association.

Many a time the San Diego Cactus and Succulent Society held their annual picnic and auction at the Taylor's Cactus Garden. It was here that Bob would demonstrate his grafting skills. In June 1979, a special perpetual trophy in Bob's name was presented by our Club for the "Best Grafted Plant" at the CSSA Annual Show.

Whenever we have visited with the Taylor's at their home or at the Club meetings, they have always given us a warm greeting and they have been continually generous with their donations of plants to the Club and to members. Bob has given many of us useful hints on culture and grafting of cacti and one of the most interesting philosophies for growing them was made by him - - - his formula, "Plant it and let it grow".

References:

- Glass, C. & R. Foster. 1975. Cactus & Succulent Nurseries: Taylor's Cactus Garden, Cact. & Succ. J. XLVII: 3-4.
- _____. 1975b. Mammillaria tayloriorum, A New Species from San Nolasco Island. Cact. & Succ. J. XLVII (4): 173-176.

CSSA CONVENTION 1981

ALBUQUERQUE

The dates for the 1981 CSSA Convention at the University of New Mexico in Albuquerque are 31 May thru 5 June 1981. The convention facilities at UNM are outstanding, our main meeting room has separate projection area, a stage for the speakers, amphitheater type seating for 900 people, adjacent rooms for other meetings and sales areas. The University tennis courts, swimming pools other sports facilities and game areas are available to us. Housing at UNM is available at estimated charges of \$6.50 per day per person for double occupancy, however there is no requirement that attendees room at UNM, there are hotels near by at \$50 and up per day.

The roster of programs is a very heavy schedule, with up to 3 programs going on at the same time, so obviously you can't attend them all. We will ask you to make reservations for the various programs on registration form. To some extent we have specialized in the history and ecology of New Mexico, with programs dealing with Kachina Dolls, Navajo Jewelry and similar subjects. The schedule calls for some 12 speakers, 12 symposia and 14 demonstrations, forums and seminars. There will be two banquets, two Convention luncheons, and one bus tour. The delegate's meeting will be the last event of the day so there will be no shortage of time, we can talk all night if we so desire.

The registration fee will be \$25, that will cover all programs and the two Convention luncheons. Registration material will be in the January 81 CSSA Journal.

It is our feeling that the 81 Albuquerque Convention will be one of the largest and most successful to date.

SEE YOU IN ALBUQUERQUE

Convention Chairman
Martin L. Mooney

Federal Protection Broadened
for Cacti

Dr. Ronald E. Monroe

Because of a legal interpretation, the cacti will now receive wider protection under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Federal Register, August 26, 1980; Endangered Species Technical Bulletin V: 7, 1980). The Departments of the Interior and Agriculture have determined that the term "all species in the Americas" for the family Cactaceae, means all species that are native to the Americas regardless of where physically located. In the past, this term was thought to refer to cacti that were physically located in the Americas; thus, Convention documentation for import, export or re-export were not previously required unless the cacti were moved from a location in the Americas. Therefore, any cacti will now be required to have appropriate Convention documentation at the time of importation into or exportation or re-exportation from the United States. This policy is effective on September 15, 1980.

We wish Harriet Sopp, a long time member, an early recovery from recent illness.

News of Interest

If members have not done so all ready, this is the time to purchase a calendar (approx. 15 by 20 inches) for yourself or as a gift for a friend or relative. At the December meeting these calendars, printed in Japan with a stunning color picture of a cactus or succulent on each page, will be offered for sale by our Club for \$3.50. Contact Betty Athy at the next assemblage.

We welcome this month the following new members:

John V. Cirrito, La Mesa
Jim & Jean Parks, La Mesa
Patricia A. Harper, El Cajon
Barbara Jolly, Imperial Beach
Mr. & Mrs. Dale Mooring, Carlsbad
Ramona E. Huftill, Imperial Beach

A reminder that the following members have signed up to provide refreshments for the December meeting:

Nellie Kennett, Ruth Richardson, Bob Taylor, Mony Monroe, John Pasek, Amna Cornett, Frances Johnson, Eileen Smith, Joan Flear, Sharon Kerbs, Ruth Stanton, Ruth Stockton, Marianne Thrombly, Jan Miller, Bruthilde Grothe and Judy McNulty.

Winners of the "Bragging Plant" competition for November were:

1st: Joan Johnson - Sarcocaulon penniculatum
2nd: Joan Johnson - Mammillaria magnifica
3rd: Joan Johnson - Crassula susannae

A special thanks to the following three members for their donations:

Shirley Berry - the book, How to Grow Beautiful Flowers, Vegetables and Plants Indoors by Sandra Erikson, to the library.
Donna Dixon - plants for last months auction.
Madelyn Lee - plants for the "Plant Sales Table".

The November "V.I.P. Table" featured an unique display of epiphyllums by Rick Latimer. A few of the plants on exhibit were: Epiphyllum Birdsley, E. Zig Zag, E. crenatum and Cryptocereus anthonyanus var.

We need a member to come forth and write Member Interview articles each month for Espinas y Flores. One of our newer members, who enjoys meeting people and owns a typewriter, could easily fill this highly challenging position. Please contact Marcia Monroe at the next meeting.

A final note -- at all times we encourage members with exceptional expertise to come forward and volunteer to write articles and/or to give suggestions that would aid in making Espinas y Flores a better Newsletter.

-----Due to the holiday mailing rush, the program and all articles for the-----
-----January issue must be handed in not later than December 22.-----

San Diego Cactus & Succulent Society

Officers

| | |
|---|----------|
| <u>President</u> - Tom Hamecher | 440-6245 |
| 996 Terrace Crest, El Cajon, Ca. 92020 | |
| <u>1st V. Pres.</u> - Richard Latimer | 463-1685 |
| 5990 Lake Murray Blvd., La Mesa, Ca. 92041 | |
| <u>2nd V. Pres.</u> - Carl McLeod | 279-2817 |
| 3516 Mt. Everest, San Diego, Ca. 92111 | |
| <u>Recording Secretary</u> - Beverly Kirkegaard | 463-2801 |
| 10009 Bonnie Vista, La Mesa, Ca. 92041 | |
| <u>Treasurer</u> - Joan Johnson | 728-7317 |
| 3099 Via Zara, Fallbrook, Ca. 92028 | |
| <u>Corresponding Secretary</u> - Anna Cornett | 291-6426 |
| 3905 Ibis St., San Diego, Ca. 92103 | |
| <u>Immediate Past Pres.</u> - H. Warren Buckner | 469-1391 |
| 1744 Englewood Dr., Lemon Grove, Ca. 92045 | |

Board of Directors

Elizabeth Athy, Shirley Berry, Dr. Ronald Monroe, Martin Mooney,
John Pasek, Dr. Leroy Phelps

Committees

Activities: H. Warren Buckner

Audit: James Berry

Conservation: Dr. Ronald Monroe

Education:

Cacti - Frank Thrombley and Dr. Ronald Monroe

Succulents - Richard Latimer and Dr. Leroy Phelps

Exhibits:

Bragging Table - Shirley Berry

V.I.P. (Very Important Plants) Table - Sandra Buck

Historian: Richard Latimer

Library: Elizabeth Athy, Ruth Nelson and Caroline Miller

Membership: Joan Johnson

Open House: Martin Mooney

Plant Exchange Table: Doris Rake and John Roth

Plants & Supplies Table: Carl McLeod

Programs: Richard Latimer

Publication: Marcia Monroe (ph. 461-8444)

Reception: Rose D'Attilio and Veryl Snowhill

Regalemt: Nancy Roth

Representatives:

Balboa Park Desert Garden - John Pasek

Quail Botanical Gardens - Audrey Johnson

S.D. Botanical Garden Foundation -

S.D. Floral Association - Verna Pasek

The San Diego Cactus & Succulent Society is open to all persons interested in growing cacti, other succulents, and exotic plants. Meetings are held the second Saturday of each month at 1:30 pm in Room 101, Casa del Prado, Balboa Park. Board of Directors meetings are held after the general meetings. Annual dues are \$7.00 per family. Single copies of Espinas y Flores are 60¢.

Marcia J. Monroe
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FIRST CLASS